

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-12. (Cancelled)

13. (Currently Amended) A closing cone for screwing closures onto containers, comprising:

a receiving part having an inner surface that defines a generally conical shape;

a pick ring disposed at least partially in said receiving part, said pick ring including a plurality of movable segments, each of said movable segments having a surface that defines a conical shape complementary to said inner surface of said receiving part and that establishes a cone-taper coupling between said pick ring and said receiving part;

an actuation system that at least one of adjusts said movable segments to establish a maximum an inner diameter of said pick ring and limits motion between said pick ring and said receiving part generally along a central axis of the closing cone;

a pick-up system including a spring system that establishes a biasing force on said movable segments of said pick ring toward said central axis of the closing cone, wherein said movable segments of said pick ring are operable to

expand against said biasing force of said spring system to accept one of the closures; and

 said pick ring operable to move relative to said receiving part generally along said central axis of the closing cone to close the cone-taper coupling and squeeze together said movable segments of said pick ring;

wherein said spring system holds at least one ball in an opening formed in at least one of said moveable segments and wherein a portion of said ball extends into said inner diameter of said pick ring.

14. (Previously Presented) The closing cone of claim 13 wherein said spring system includes a spring ring that engages said plurality of movable segments.
15. (Cancelled)
16. (Previously Presented) The closing cone of claim 13 wherein said actuation system includes a resetting device that moves said pick ring relative to said receiving part to open said cone-taper coupling.
17. (Previously Presented) The closing cone of claim 13 further comprising a screw held by said receiving part, a portion of said screw extends toward one of said moveable segments and a portion of said screw is accessible from an exterior of said receiving part, wherein said screw can be selectively adjusted to limit a degree of closure of said cone-taper coupling.

18. (Previously Presented) The closing cone of claim 13 wherein at least one of said moveable segments includes a beveled intake portion operable to direct the closure into said pick ring.
19. (Previously Presented) The closing cone of claim 13 further comprising a friction ring disposed between said pick ring and said receiving part and operable to exert a torque force on the closure.
20. (Previously Presented) The closing cone of claim 13 wherein an inner surface of said pick ring includes grooves that are generally parallel to said central axis of the closing cone.
21. (New) The closing cone of claim 13, wherein said at least one ball includes a plurality of balls.
22. (New) The closing cone of claim 13, wherein said at least one ball has an outer diameter greater than a diameter of said opening.
23. (New) The closing cone of claim 13, wherein a spring device biases said at least one ball to extend into said inner diameter.

24. (New) The closing cone of claim 23, wherein said spring device allows the cone to widen said pick ring when placed on a screwing closure.
25. (New) A closing cone for screwing closures onto containers, comprising:
- a receiving part having an inner surface that defines a generally conical shape;
 - a pick ring disposed at least partially in said receiving part, said pick ring including a plurality of movable segments, each of said movable segments having a surface that defines a conical shape complementary to said inner surface of said receiving part and that establishes a cone-taper coupling between said pick ring and said receiving part;
 - an actuation system that at least one of adjusts said movable segments to establish a maximum an inner diameter of said pick ring and limits motion between said pick ring and said receiving part generally along a central axis of the closing cone;
 - a pick-up system including a spring system that establishes a biasing force on said movable segments of said pick ring toward said central axis of the closing cone, wherein said movable segments of said pick ring are operable to expand against said biasing force of said spring system to accept one of the closures; and
 - said pick ring operable to move relative to said receiving part generally along said central axis of the closing cone to close the cone-taper coupling and squeeze together said movable segments of said pick ring;

wherein said actuation system includes a resetting device that moves said pick ring relative to said receiving part to open said cone-taper coupling.

26. (New) A closing cone for screwing closures onto containers of claim 25, further comprising a friction ring disposed between said pick ring and said receiving part, said resetting device includes a recess provided in said friction ring and a spring unit introduced into said recess.
27. (New) A closing cone of claim 25, wherein said spring unit is in the form of a helical spring.
28. (New) A closing cone of claim 26, comprising a plurality of helical springs distributed over a periphery of said friction ring to provide a uniform downward force to said friction ring.
29. (New) A closing cone for screwing closures onto containers, comprising:
 - a receiving part having an inner surface that defines a generally conical shape;
 - a pick ring disposed at least partially in said receiving part, said pick ring including a plurality of movable segments, each of said movable segments having a surface that defines a conical shape complementary to said inner surface of said receiving part and that establishes a cone-taper coupling between said pick ring and said receiving part;

an actuation system that at least one of adjusts said movable segments to establish a maximum an inner diameter of said pick ring and limits motion between said pick ring and said receiving part generally along a central axis of the closing cone;

a pick-up system including a spring system that establishes a biasing force on said movable segments of said pick ring toward said central axis of the closing cone, wherein said movable segments of said pick ring are operable to expand against said biasing force of said spring system to accept one of the closures; and

said pick ring operable to move relative to said receiving part generally along said central axis of the closing cone to close the cone-taper coupling and squeeze together said movable segments of said pick ring; and

a screw held by said receiving part, a portion of said screw extends toward one of said moveable segments and a portion of said screw is accessible from an exterior of said receiving part, wherein said screw can be selectively adjusted to limit a degree of closure of said cone-taper coupling.

30. (New) A closing cone for screwing closures onto containers, comprising:

a receiving part having an inner surface that defines a generally conical shape;

a pick ring disposed at least partially in said receiving part, said pick ring including a plurality of movable segments, each of said movable segments having a surface that defines a conical shape complementary to said inner

surface of said receiving part and that establishes a cone-taper coupling between said pick ring and said receiving part;

an actuation system that at least one of adjusts said movable segments to establish a maximum an inner diameter of said pick ring and limits motion between said pick ring and said receiving part generally along a central axis of the closing cone;

a pick-up system including a spring system that establishes a biasing force on said movable segments of said pick ring toward said central axis of the closing cone, wherein said movable segments of said pick ring are operable to expand against said biasing force of said spring system to accept one of the closures;

said pick ring operable to move relative to said receiving part generally along said central axis of the closing cone to close the cone-taper coupling and squeeze together said movable segments of said pick ring; and

a friction ring disposed between said pick ring and said receiving part and operable to exert a torque force on the closure.

31. (New) The closing cone for screwing closures onto containers of claim 30, wherein the friction ring rests on a top side of said pick ring.

32. (New) The closing cone for screwing closure onto containers of claim 30, wherein said friction ring transfers frictional forces to a screw closure disposed inside said pick ring.

33. (New) The closing cone for screwing closure onto containers of claim 30, wherein said friction ring is constructed of a plastic material.